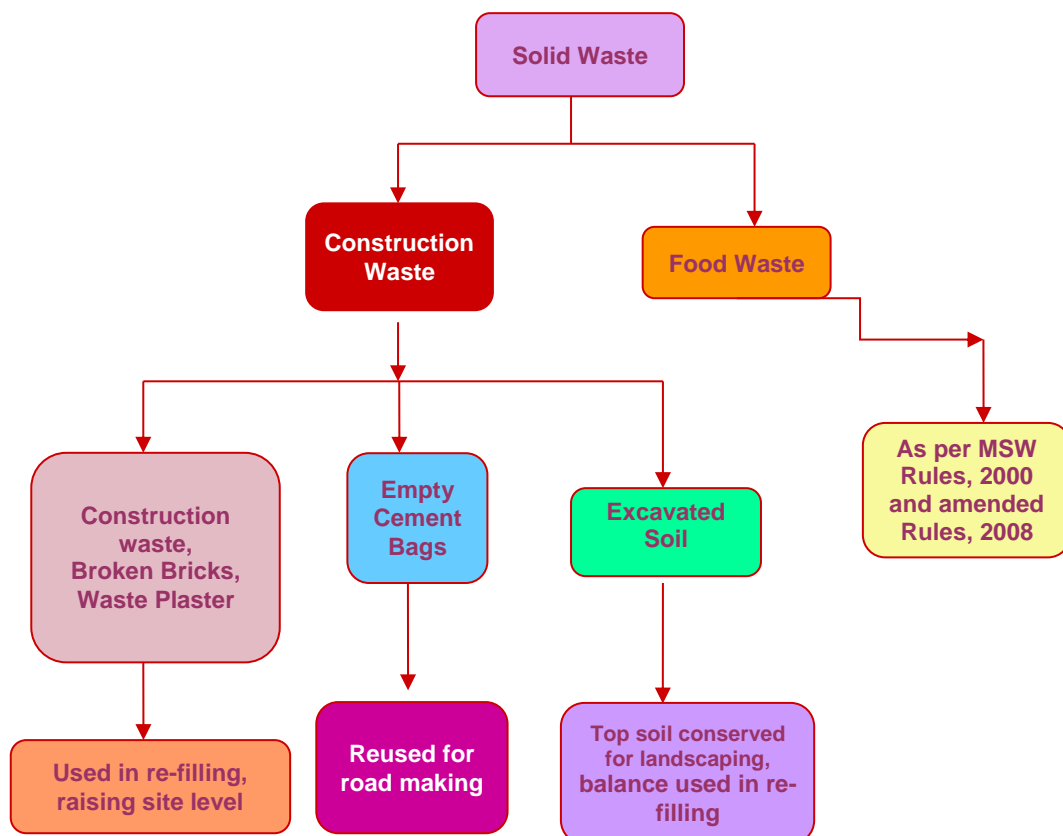


## 11.0 SOLID WASTE GENERATION

Solid waste would be generated both during the construction as well as during the operation phase. The solid waste expected to be generated during the construction phase will comprise of excavated materials, used bags, bricks, concrete, MS rods, tiles, wood etc. The following steps are proposed to be followed for the management of solid waste:

- Construction yards are proposed for storage of construction materials.
- The excavated material such as topsoil and stones will be stacked for reuse during later stages of construction.
- Excavated top soil will be stored in temporary constructed soil bank and will be reused for landscaping of the residential group housing project.
- Remaining soil shall be utilized for refilling / road work / rising of site level at locations/ selling to outside agency for construction of roads etc.



**Figure 5: Solid Waste Management Scheme (Construction Phase)**

During the operation phase, waste will comprise domestic as well as agricultural waste. The solid waste generated from the project shall be mainly domestic waste and estimated quantity

of the waste shall be 865 kg/day & 1295 kg/day for phase-1 & phase-2 respectively. Following arrangements will be made at the site in accordance to Municipal Solid Wastes (Management and Handling) Rules, 2016.

**Table 7: phase-1 Calculation of Solid Waste Generation**

S. No.	Category	kg per capita per day	Waste generated (kg/day)
1.	Residents	1400 @ 0.5 kg/day	700.00
2.	Staff	400@ 0.25 kg/day	100
3.	Commercial shopping/Community ➤ Staff	20 @ 0.25 kg/day	5
3.	Floating population/Visitors	400 @ 0.15 kg/day	60.00
4.	Landscape waste	0.45acre @ 0.2 kg/acre/day	0.09
	<b>TOTAL SOLID WASTE GENERATED for Phase-1</b>		<b>865.09 or 865.00 kg/day</b>
<b>B</b>	<b>Residents for phase-2</b>	2590 @ 0.5 kg/day	<b>1295 kg/day</b>

(Source: For Waste Collection, Chapter 3, Table 3.6, Page no. 49, Central Public Health & Environment Engineering Organization, Ministry of Urban Development, (Government of India, May 2000))

❖ **Collection and Segregation of waste**

1. A door to door collection system will be provided for collection of domestic waste in colored bins from household units.
2. The local vendors will be hired to provide separate colored bins for dry recyclables and Bio-Degradable waste.
3. Litter bin will also be provided in open areas like parks etc.

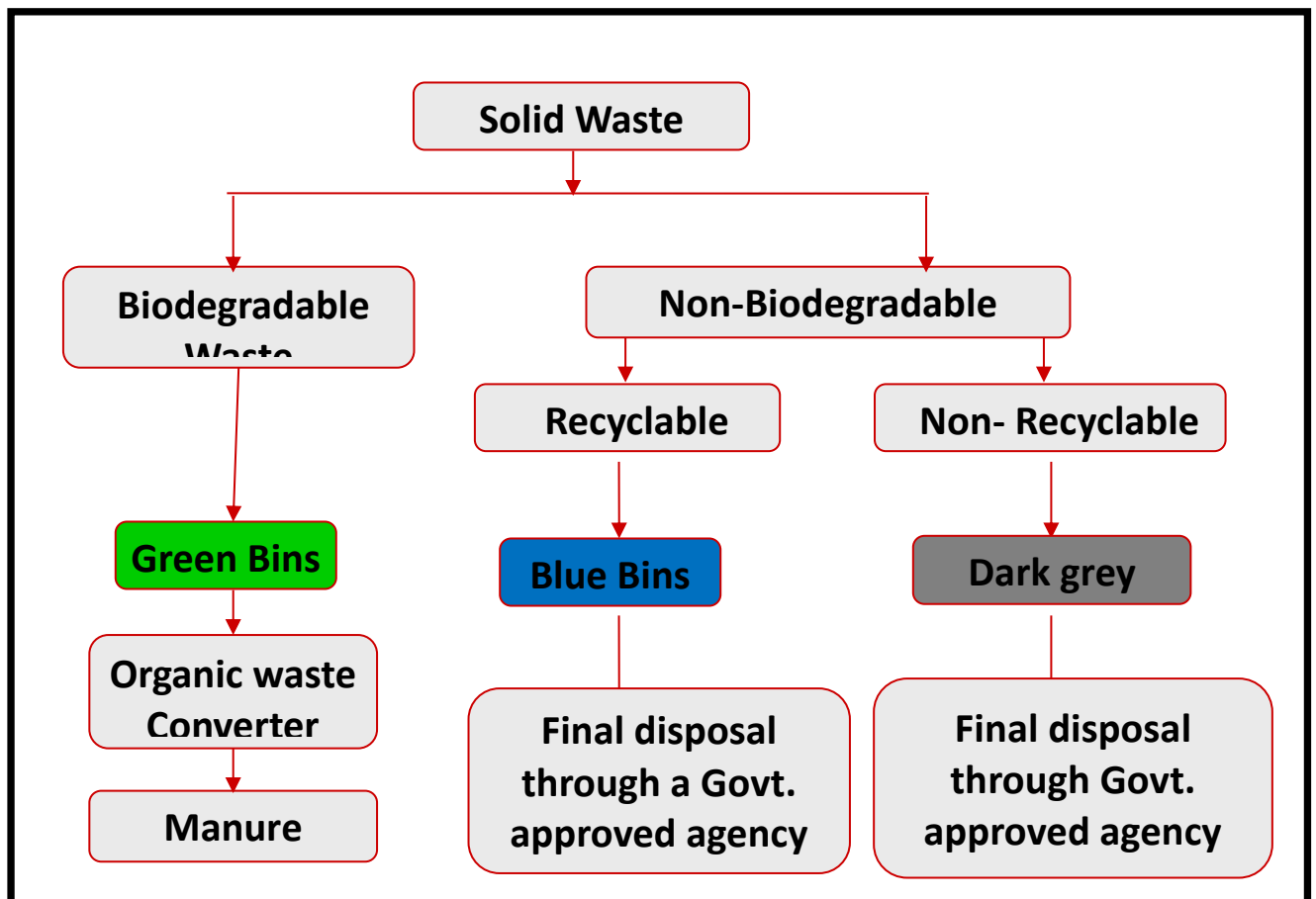
❖ **Treatment of waste**

- Bio-Degradable wastes

1. Bio-degradable waste will be subjected to organic waste convertor and the compost will be used as manure.
  2. STP sludge is proposed to be used for horticultural purposes as manure.
  3. Horticultural Waste is proposed to be composted and will be used for gardening purposes.
- Recyclable wastes
    - i. Grass Recycling – The cropped grass will be spread on the green area. It will act as manure after decomposition.
    - ii. Recyclable wastes like paper, plastic, metals etc. will be sold off to recyclables.

❖ **Disposal**

Recyclable and non-recyclable wastes will be disposed through Govt. approved agency. Hence, the Municipal Solid Waste Management will be conducted as per the guidelines of Municipal Solid Wastes (Management and Handling) Rules, 2000 and Draft Rules, 2013. A Solid waste management Scheme is depicted in the following figure for the residential project.



**Figure 6: Solid Waste Management Scheme (Operation Phase)**